

Engaging Landowners without a Management Plan:
A Social Marketing Approach

By

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ABSTRACT

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Recent statistics from the National Woodland Owner Survey indicate that only 25% of North Carolina woodland landowners have received management advice and only 9% currently have forest management plans. The NC Division of Forest Resources is utilizing research information to improve communication between woodland landowners and the natural resource professionals that serve them. Their goal is twofold:

- 1) inform landowners of the associated benefits and opportunities for forest stewardship and/or management, and
- 2) increase landowner's engagement to seek management advice and to become more active land managers.

A social marketing approach was implemented to identify prime prospect landowners in North Carolina most likely to be receptive to stewardship practices and actively engage in DFR services. Perspective candidates were identified and a detailed communication plan was created with specific targeted messages.

An engagement plan survey was then sent to natural resource professionals in order to gain insight and perspective. The survey revealed that social marketing training and proper materials were needed to engage natural resource professionals with prime prospects in North Carolina. Materials and tools were prepared for professionals to enroll landowners into US forest service programs and developing an active management plan on their land.

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Introduction

A majority of the United States is covered by natural resources that are in need of protecting. In 2004, an estimated 620 million acres of the nation was covered by woodlands (Smith et al. 2004) of which private landowners control 2/3, or 400 million acres (Butler and Leatherberry, 2004). Engaging landowners in sustainable forestry practices and stewardship is important to preserve the nation's environment. Collectively, landowners' decisions can fragment the land and contribute to deforestation. Natural resource professionals are urged to assist these landowners in enrolling into a land management plan that will safeguard woodlands. Nationally only 3% of non-industrial private landowners have an active management plan for the land and only 16% have sought professional advice (Butler et al. 2007). The role of the US Forest Service (USFS) is to reach these landowners and provide management advice on their woodland, however, a large portion of these individuals are not being reached. A new marketing scheme has been created to identify landowners that express high levels of interest but low levels of engagement in order to increase the number of landowners involved in management plans.

There are an estimated 500,000 woodland landowners in North Carolina who own more than 15 million acres of forest (Butler, 2008). In North Carolina more than half of family woodlands are under 10 acres and that nearly 9 out of 10 family woodland owners have tracts that are less than 50 acres in size¹ (Butler and Leatherberry, 2004). A majority of these landowners are family woodland owners that do not operate with a management plan or seek outside professional advice. Only 9% of North Carolina's woodland owners report having established management plans, and 25% has sought outside professional advice (TELE, 2009). To increase the numbers of owners with written management plans the North Carolina Division of Forest Resources (DFR) will focus on streamlining communication efforts and targeting specific clientele through the use of social marketing plans. Social marketing plans will help DFR focus its efforts in identifying, communicating, and engaging family woodland owners that are most

¹ See Figure 1

receptive to stewardship practices. By applying a social marketing approach to forestry, DFR can increase the level of awareness of sustainability practices in North Carolina.

This paper will examine the demographics and land characteristics of North Carolina's family woodland owners. Using information from the National Woodland Owner Survey and the Sustainable Family Forest Initiative, the goal is to identify and effectively communicate with family woodland owners that currently do not have active management plans or have sought out advice from a professional. By doing so, DFR hopes to train natural resource professionals on targeting family woodland owners that are receptive to stewardship practices and interested in the programs the USFS has to offer.

DFR Landowner Grant

The DFR, in its efforts to increase the number of written management plans for family woodland owners and to encourage landowners to seek out professional's advice, obtained a grant from USFS State and Private Redesign effort. This grant was to support DFR's efforts in investigating the benefits of using social marketing as a tool to identify family woodland owners and to learn to communicate ideas and to engage family woodland owners in forestry services. The grant called for a synthesis of available survey data and literature review for use by natural resource professionals in their interactions with family woodland owners. Final outcome of the grant included a report, presentations and materials that were provided to DFR field personnel.

The grant identified specific characteristics to target family woodland owners that are current under served. The targets are private landowners that own between 11- 99 acres and are between the ages of 55 and 75 throughout the state of North Carolina. These individuals have proven to be underserved in the state and typically operate without written plans. It is DFR goal to determine these landowners, where they are located and to engage them in agency services and programs.

National Woodland Owner Survey

The National Woodland Owner Survey (NWOS) is the official census of woodland owners in the United States, and is implemented to increase professional's knowledge of forest owners (USDA Forest Service, 2009). Each year the Forest Inventory and Analysis program (FIA) contacts over 6,500 private forest owners, and over 15,000 family woodland owners have participated since the program began in 2002 (Bengston, 2008). Survey questions provide information on land cover, landowner objectives, land management, demographics and land concerns. Questions are open ended, and a multi-variant analysis is executed to categorize landowners into groups of engagement and interest levels. In the most recent data, 321 North Carolina family woodland owners participated; a response rate for the state of 44% (Butler, 2008). Information gathered from the survey provides a general perspective of all landowners in North Carolina and highlights current management trends that are occurring. Family woodland owners included families, individuals, trusts, estates, family partnerships and other unincorporated groups of individuals that own forestland (Butler, 2008).

Forest Holdings

Target family woodland owners were determined based on the average forest holdings in North Carolina. The target woodland owners are private landowners that own between 11- 99 acres and are between the ages of 55 and 75 throughout the state of North Carolina. These individuals have proven to be underserved in the state and typically operate without written plans. Forest holdings play a important part in identifying target landowners because the grant specifically wants to market to those individuals who own smaller parcels than the average commercial business and landowners that own larger properties than the suburban lot. At this time, DFR is currently under serving these individuals and forestry services are not being provided to these landowners Specifically average forest holdings among family woodland owners are between 20 and 49 acres in the state (Butler, 2008).

Reasons for Owning Land

The top five reasons² for owning forestland nationally are

1. Family Legacy
2. Land Investment
3. Beauty and scenery
4. Part of Farm or Ranch
5. Nature Protection (Butler, 2010)

North Carolina's top reasons for owning woodlands can be grouped into six major categories: environmental values, recreation, investment/income, non-instrumental values, home/quality of life and incidental ownership (Bengston, 2008).

Demographics and Concerns

Family woodland owners in North Carolina are consistent in demographics and land ownership concerns. Most woodland owners are 65 or older, 85% are male and an estimated 96% are Caucasian. Landowners are reported to the NWOS that 60% are retired and only 37% have a college degree. The main concerns reported by family woodland landowners in the state are family legacy, fire, insects and plant diseases, storms and property taxes (Butler, 2010).

² See Figure 2

Landowner Management Trends

There are several landowner trends in North Carolina that are being observed. The woodland owner survey found forest owners placing a high importance in keeping land within their family. Professionals have predicted that the number of land transfers to occur will substantially increase over the next 10 to 20 years. The survey also found that an increase in the average age of family woodland owners is occurring compared to the previous two surveys conducted over the last 10 years (USDA Forest Service, 2009).

Family woodland owners are planning very few activities for their forest in the next few years. Landowners are hesitant to invest financially in their land and avoiding management all together. More than 70 percent of all NC landowners are planning minimal to no activity in the next five years (Butler, 2010). This is alarming due to these landowners not having a management plan or participating in forest programs. It is important to reach these landowners in order to keep forests intact in North Carolina.³

Social Marketing

Social marketing was introduced in the early seventies as a new and efficient strategy to sell products to new clientele. The idea of marketing relies on the core principle of the “exchange process” (Kotler, 1971). This processes is the exchange of ideas, goods or services in which two different parties take part. There are four “p’s” of commercial marketing, which is the foundation of social applications. They are product, price, place and promotion. Social marketing applies commercial marketing strategies to public education and engagement (Horner, 2009). A famous and enduring social marketing campaign is Smokey the Bear (Butler, 2007). Social Change media describes the purpose of social marketing as the following:

³ See Figure 3

The goal of our work is altered behavior not just raised awareness. This means focusing on the obstacles that prevent communities achieving their goals. These obstacles may include lack of skills, lack of infrastructure, lack of confidence, lack of policy, lack of ownership-in other words more than just lack of information(www.socialchange.net).

By using the social marketing approach, professionals can accurately identify and reach, these underserved landowners. The social marketing strategy has potential to motivate people because it models the wanted behavior instead of trying to directly convince the listener (Horne, 2009). Using a social marketing approach, professionals can accurately identify prime prospect profiles, effectively communicate with these landowners, and finally engage them into programs. The end goal is to increase the number of family land landowners who implement a management plan and or seek assistance (Butler, 2007).

The responsibility of the landowner grant is to implement the research into usable material for landowners and professionals and evaluate the results. Using North Carolina data obtained from the National Woodland Owner survey, social marketing techniques will be applied to further identify landowners' motivations and identify barriers that hinder participation in outreach programs.

Sustainable Family Forest Initiative

The Sustainable Family Forest Initiative (SFFI) is a collective of government agencies, private industries, non-government organizations, academia and landowners that have organized themselves in

order to learn more about family woodland owners in the United States. This group was created to reduce the risk of forested lands being fragmented amongst private landowners and to inform landowners that as a group, their decisions can alter the landscape of the environment. Researchers use NWOS information to provide “direction and enhanced outreach” to bring about environmental and sustainable forestry awareness (Feinberg et al, 2007). The SFFI uses a hierarchical system to classify family woodland owners. Using variable segmentation analysis, landowners are classified based on levels of engagement in a prime prospect analysis. Once sorted, landowners are further segmented based on attitudes and behaviors toward land management. Information generated on attitude profiles is based on the Tools for Engaging Landowners Effectively (TELE) website. These profiles have been exposed to social marketing techniques in order to identify successful communication techniques and identify current barriers that are occurring.

Prime Prospect Analysis

The prime prospect analysis identifies landowners who are most likely to adopt stewardship behaviors. The analysis is designed to provide solutions to three questions:

1. Who should sustainability/conservation initiatives target?
2. What should the message be?
3. What’s the best way to reach them with the message? (Feinberg et al, 2007)

To answer these questions, a multi-variant analysis was performed on the answers from the NWOS and the Sustainable Family Forest Initiative separated family woodland owners into four groups. There are four categories in this analysis: Model Owners, Opportunists, Write Offs and Prime Prospects. Model Owners are landowners who already have a stewardship mindset and are engaged in several forestry programs. Opportunists are somewhat engaged in programs but are more driven by financial

goals than stewardship. Write Offs are landowners that are not engaged in stewardship behavior or programs. Finally, Prime Prospects are landowners that show favorable attitudes toward stewardship but are currently not engaged in a management program (TELE, 2009).⁴ Prime Prospect landowners will be the most receptive to natural resource professionals and are most likely to engage in the recommendations provided to them. Using general characteristics created by the TELE website foresters and rangers can identify a specific profile and utilize marketing techniques to reach target woodland owners.

Attitudinal Segmentation

Family woodland owners in North Carolina share similar demographic characteristics and management motivations. However, landowners differ in their attitudes, on engagement, interest, and reasons for owning land (Feinberg et al, 2007). In order to create a successful social marketing campaign, professionals must understand and differentiate the unique profile qualities. To gain a better understanding of prime prospects, a hierarchical cluster analysis was performed on NWOS data to identify segments. Variables used in this analysis were:

1. Important reasons for owning the land
2. Concerns regarding restrictions on woodland use
3. Future plans for the land (Feinberg et al, 2007)

The attitudinal segmentation is divided into four categories. Categories of landowners are listed as Woodland Retreat, Working the Land, Supplemental Income and Absentees. The profile makeup for North Carolina shows that the most prevalent landowners that are likely to respond to a management plan

⁴ See Figure 4

offer are woodland retreat owners and working-the-land-owners.⁵ Together these landowners make up more than 50% of the population. By targeting landowners with these profiles, professionals will have a better chance at increasing the number of forested acres under a written management plan or the number of landowners seeking advice. The following two profiles for Woodland Retreat and Working the Land landowners provide information on demographics, reasons for owning land, top concerns, management motivations and communications techniques are provided.

Woodland Retreat

Demographics

Woodland Retreat landowners make up the largest segment of family woodland owners in the United States. They comprise 40% of landowners and own over a third of the nation's private forested lands. In North Carolina there are over 47,000 owners, owning 1.8 million acres. The piedmont has the largest representation of woodland retreat owners equating to 30 percent of woodland owners. The second highest population of woodland retreat owners is in the mountains with an estimated 28 percent.

These landowners are predominantly retirees with their woodland home being their second property. Families are more affluent with a household annual income well over \$50,000 annually and over 33 percent have a college degree or higher. Professionals can expect a majority of these landowners over the age of 65, although a significant portion of the landowners are younger due to early retirement. Forested land in this demographic is owned by Caucasian males.

Forest Holdings

⁵ See Figure 5

Land characteristics of plot sizes are distinctive for woodland retreat owners. Parcels tend to be smaller in size with the average being 43 acres. Thirty five percent of land owned by woodland retreat owners in North Carolina.⁶ live on their land and have owned properties on an average of 21 years or longer. Most landowners originally purchased their land with the purpose of passing it to future heirs.

Reasons for Owning Land

Unlike the other profiles in prime prospects, woodland retreat owners purchased their land for aesthetic and recreational value. Landowners place a high importance on beauty, biodiversity, privacy, hunting and recreation. They are interested in conservation and sustainable practices and view themselves as stewards of the environment. Their main reasons for owning land are privacy, legacy and scenery. Owners are not receptive to traditional forestry management or timber production.⁷ Top concerns for these landowners include pollution, property taxes and family legacy.

Land Management Trends

Woodland retreat owners are the least active group in conventional forestry management schemes. Less than half of the owners report harvesting trees on their land, and only 34% have harvested for commercial purposes. With such a strong focus on conservation and biodiversity, most thinning applications have been done to improve the quality of life for healthy trees and removing damaged ones. In North Carolina only 3% of woodland retreat owners have a management plan in place and less than 21% have sought out management advice from a natural resource professional. Almost half of all owners plan none or minimal activity for their lands in the next five years. General awareness of cost share

⁶ See Figure 6

⁷ See Figure 7

programs or forestry services is minimal and the majority of owners when it comes to forestry management practices.⁸

Communicating Effectively

Woodland retreat owners do not actively seek natural resource advice or information from US Forest Service representatives or extension agents. It is necessary to understand the land objectives when identifying and communicating with these profiles. Woodland Retreat owners are interested in the aesthetics and recreational value of their land. Successful messaging should center on legacy and land transfer issues, woodland health, wildlife and biodiversity and conservation practices.

The language used when communicating with woodland retreat owners is important. Landowners are not interested in forest management and are not knowledgeable in forestry jargon. Messages should be simple and be presented with their objectives in mind. Successful phrases from the National Woodland Owner survey results include: “woodlands are valuable,” “enjoy woods alone and with my family,” and “doing the right thing for my woods.” Natural resource professionals should also avoid terms such as “silviculture,” “sustainable,” or aligning with a certain recreational activity such as hunting or fishing as it may alienate the landowner. By keeping messaging general, landowners are able to communicate more effectively with professionals and will be more inclined to seek out advice in the future.

Barriers to Communication

Several barriers to communication exist with North Carolina woodland retreat owners. Woodland retreat owners feel that timber harvesting and commercial wood products are the only management

⁸ See Figure 8

option. When reaching out to these owners, present information that focus on their objectives, sustainable forestry and preserving woodland habitat. A lack of confidence in their management skills and inexperience with trees has stopped them from implementing plans or reaching out on their own. Professionals can alleviate both financial and managerial concerns by providing advice for the individual landowners specific expertise level.

Working the Land

Demographics

Working-the-land- owners are the second largest segment of family woodland owners. They constituted 30% of all woodland owners, and hold more than 37% of the land in the United States. There are 65,000 owners in North Carolina that own over 3.2 million acres. The majority of working-the-land-owners live in the northern coastal plane. An estimated 52% make up the 32,564 woodland owners that live there. In the piedmont working-the-land-owners represent 42% of all woodland owners, making this area the second largest population in the state.

These individuals are pragmatic and are heavily invested in their land. Families are less affluent than woodland retreat owners, reporting a household income below \$50,000 annually. Two out of five working-the-land-owners did not earn a college degree, however 33% did graduate from a college or university. The majority of landowners are over the age of 65 and are Caucasian males. Deeds to properties are in the male's name; however, management decisions are made jointly within a household.

Forest Holdings

The size of acreage for working-the-land-owners is larger due to the financial investments they are interested in. Average parcel size is 58 acres and over 25% of land owned by this profile have similar properties equal in size in North Carolina.⁹ Families live directly on their land and have owned their woods on an average of 24 years or longer. Landowners have initially purchased their land with the purpose of passing it to future heirs.

Reasons for Owning Land

Working-the-land-owners are mainly interested in the financial benefit they receive from their land but are open to recreational options as well. Landowner reasons for owning land focus on the woodland, being a productive asset, investment, and family legacy. North Carolina working-the-land-owners reported that over 90% own land for investments, and over 80% own land for legacy purposes. This profile is more receptive to conventional management schemes and understands the financial value in timber production and thinning operations. Top concerns for these landowners are family legacy, property taxes and woodland health.¹⁰

Land Management Trends

Working-the-land-owners are the second most likely profile of the prime prospects to report harvesting trees on their land. Over 61% have reported cutting, and nearly half have harvested for commercial purposes. Working-the-land-owners are more likely than woodland retreat owners to have a management plan in place. In North Carolina, 14% have claimed to have an active plan and over 33%

⁹ See Figure 9

¹⁰ See Figure 10

have sought the advice of a professional. Besides financial benefits, the main reason landowners remove trees is for the overall health of the woodlands. Over 50% of North Carolina working-the-land-owners plan little to no activities for their land in the next five years. Knowledge on cost share assistance and certification programs are minimal.¹¹

Communication Effectively

Working-the-land-owners would benefit from natural resource professionals advice but are wary of experts, therefore it is important to identify the landowners' objectives and concerns. Target messages should concentrate on woodland ownership, planning and harvesting and financial and recreational values. If professionals are able to combine values and objectives, working-the-land-owners will be more responsive.

Similar to woodland retreat owners, appropriate language and vocabulary used are key to communicating effectively. Management advice should be presented through landowner's perspectives. Therefore landowners will be most receptive to messages regarding shared experiences and realistic goals. It is important for professionals to present strong programs that are manageable and feasible to landowners. Phrases deemed successful by the National Woodland Owner survey are "woodlands are valuable," "respect the land and use it wisely," and "make decisions carefully." Avoid specific terminology such as "forest owner" as most woodland owners feel that forests are larger than their properties. Other cautionary words include "logging" or "timber" as they may have negative connotations. It is best to refer to these activities as harvesting trees.

¹¹ See Figure 11

Barriers to Communication

Several barriers to communication have hindered North Carolina working-the-land-owners from engaging with natural resource professionals and enrolling into services and programs. A major barrier is that working-the-land-owners are skeptical to outside advice. These owners prefer local and conventional opinions rather than professional expertise. Another barrier is that landowners feel that professionals are not valuing their goals for their land and feel they are being “told” how to manage their land.

Landowners’ feel they have a right to implement individual management operations despite not being educated in programmatic details. It is important for professionals to approach these landowners with these barriers in mind and reassure that advice and tips provided are realistic for their established goals.

Engagement Plan

Natural resource professionals are currently unable to serve a majority of North Carolina landowners. This is due to a variety of reasons including but not limited to miscommunication among the parties involved, a lack of outreach to new clientele with varying objectives, and insufficient support by managerial positions. The Division of Forest Resources (DFR) of North Carolina has focused their efforts to better serve the needs of the family woodland owners in order to promote sustainability, stewardship and environmental awareness.

The last objective of the landowner redesign grant was to provide information and create materials for the natural resource professional so that they may efficiently add clients without increasing their daily workload. The process was developed from the viewpoint of the natural resource professional so that the implementation would be seamless and benefit all parties.

Natural Resource Survey

A survey was provided to natural resource professionals to identify the barriers facing these natural resource professionals in communicating, engaging and servicing unreached woodland landowners. This survey was distributed by DFR to state foresters and rangers listservs and through North Carolina State University Cooperative Extension. One hundred twenty two individuals participated in the survey and their results were taken into consideration in the development of the field materials. The participants included 25% DFR foresters, 12% DFR rangers, 47% NC consulting foresters and 15%, which included extension agents and academia.¹ To create feedback, both guided and open-ended-questions were provided to participants. The first analysis question was “What landowner information would best help you understand the characteristics of unreached or potential clients?” More than 75% of participants responded that the landowner attitudes were a primary barrier relating to forest management. Secondary comments included requests on the methodology involved in locating landowners and how to create an economic motivation.² The second question asked, “What is the greatest challenge in engaging and serving woodland landowners that do not currently have a forest management plan?” Results from the participants were divided between two related categories. Thirty six percent reported that the greatest challenge was the lack of awareness by landowners of forestry services and information available to them and 31% reported that the forest management professional did not have the marketing tools to effectively market forest management programs from a non-biological perspective.³ This group of participants is seeking not only tangible materials but also improvements in the skill sets required to inform landowners in the variety of programs available. The last guided question was “What materials will assist you best to effectively engage and service woodland landowners needing management assistance?” Participants

¹ See Graph 1

² See Graph 2

³ See Graph 3

responded overwhelmingly with 66% requesting written material such as a brochure or a hand out style fact sheet that provides clear to landowners so that their laissez-fair approach to forest management can be overcome.⁴ Professionals felt that the greatest challenge in engaging and serving family woodland landowners was the lack of awareness by landowners of forestry services and the information that is available to them. This has been described in the business communities as a D/K not D/E. In other words, it is a Deficiency of Knowledge by the Landowners and not a Deficiency of Execution. By providing basic information, the landowners could be motivated to execute a plan with similar goals of the forestry service. The survey indicated over 50% of the participants also felt that the best materials that will assist them in the field were written materials. Comments and responses from the survey drove the direction as to what materials would be created and how the remainder of the grants resources would be allocated.

Comments for the open-ended questions for the survey were also observed for general themes and recorded. The first question was “How would you creatively reach and provide assistance to more “prime prospect” woodland landowners?” Common response themes were the promotion of regional landowner conference to encourage peer-to-peer interaction, general mailings, and outreach from participating local landowners and professionals using local advertising such as television or radio. The last open-ended questions sought direct feedback “Do you have other ideas, comments or advice that will improve the materials that we are preparing for your use?” Response themes were that professionals must address all of the landowner’s objectives, stress the importance of the role of the professional and the services they provide and effectively market the forest service.

Spatial Analysis Identification

⁴ See Graph 4

A major concern that the natural resource professionals expressed from the survey was locating prime prospects in their regions. Using Geographic Information System (GIS) both landowners and property land cover were spatially analyzed.

Information is from several sources online. The Wake County orthorectified mosaic photograph is from the USDA Geospatial Data Gateway. It was produced in 2009 for the National Agricultural Imagery Program at a scale of 1:40,000 on color positive film. The photograph is with leaf with mature crops prior to harvest. The format of this image is a raster MrSID compression and the spatial reference is UTM NAD83. The property data is from Wake County GIS: Mapping Services. Shapefiles depicting parcel features were created in 2006 for the county and displayed as topological polygons. The spatial reference for the shapefiles is UTM NAD8 with a North Carolina State Plane coordinate system in feet. The software used for this assessment was ArcMap from ArcGIS 9.0.

Property data was taken from Apex, North Carolina. Apex was the study area because of its quality as a quickly developing suburb of Raleigh as well as its rural features. Both the orthorectified image and the shapefiles were downloaded and added to ArcMap to begin the analysis.

Selecting the Criteria

Criteria from property shapefiles were selected based on known characteristics from prime prospect profiles. The first step of this process was to calculate the acreage of the properties. In order to get the best representation of landowners, a specific range of 11-99 acres was selected. This range represents woodland retreat owners and working the landowners as well as eliminating subdivision lots and large farms. The next criteria that was selected was the purpose of property. Knowing that the prime prospects are family woodland owners, the purpose was defined as “single family.” This eliminated corporations and industries that owned property in Apex.

Dot Grid Overlay

The next step in ArcMap was to incorporate a dot grid overlay to assist in the land cover assessment. By adding the extension Hawth's tools, a 100-point spacing of equidistant points was applied to the shapefiles. In order to see the aerial photograph, the shapefiles were altered to a 60% transparency and the dot size in the grid were increased in size.

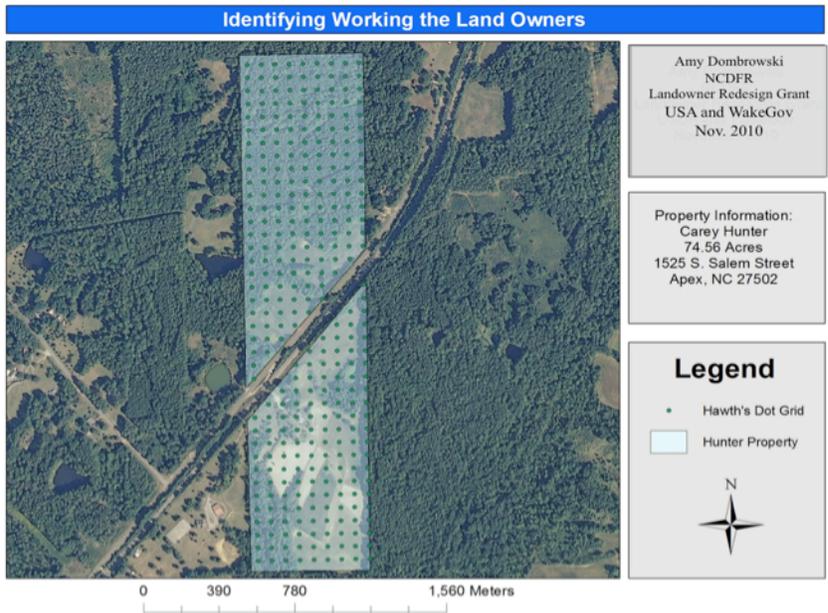
Land Cover

To assess the land cover within each parcel, cover types were divided into four categories. These categories were Developed land, Agriculture or pasture, woodlands and water. Dots were then counted for each category for each property as well as the total dots located within the property boundaries. The final step was to relate the number of dots to the percentage of land cover. The following equation was applied to each category on each property; $\text{Land Cover \%} = 100\% * (\text{Dots found in Category} / \text{Total dots in the property})$. A spreadsheet was created for each property describing the results.⁵

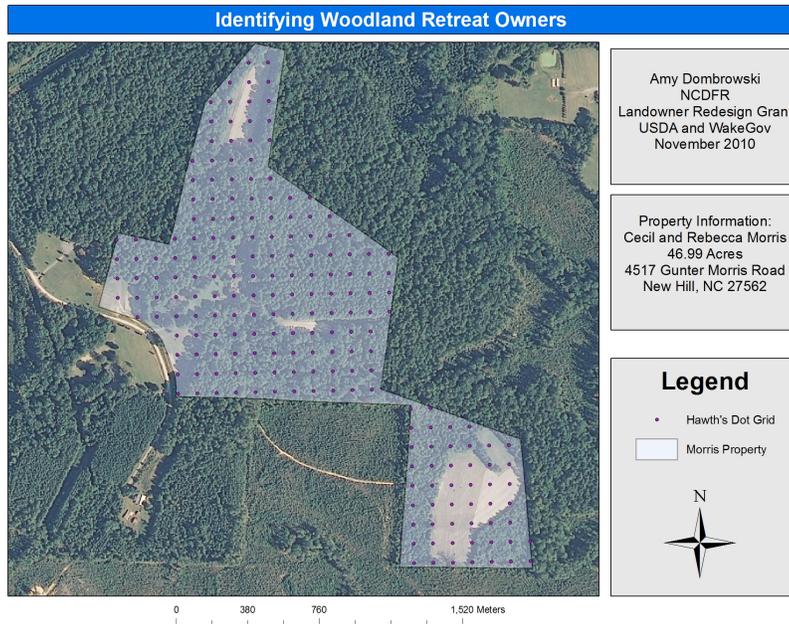
Data yield from the dot count from Hawth's tools were collected using the land cover equation and properties with specific identified features and land cover percentages were further investigated. When property files were initially downloaded, over 1500 parcels were collected. In order to effectively market to the preferred clientele, the selection of attributes was conducted. Once the criteria were imposed, 133 parcels were yielded. From this collection of desirable features, others were identified for further examination. Desirable features included a home located on the property, a water source and more than 50% of the land is wooded. These were desirable features as they are most similar to the known land characteristics of woodland retreat owners and working the landowners. By narrowing down these features, professionals are more likely to target these landowners that are deemed prime prospect and who currently do not have a management plan. Once property data is analyzed recommendation can be made based on land cover types that are present.

⁵ See Table 1

Parcel descriptions for both woodland retreat owners and working-the-land-owners have similar characteristics. Knowing basic information about these profiles, professionals can assume that this landowner does not have a management plan and make initial steps to contact the landowner and offer recommendations. In the working the land reference map, a portion of the property is cultivated.



This is because financial objectives are motivational drivers. The woodland retreat owners, have more of the woodlands intact, therefore it is more likely to see larger patches of trees.



Therefore professionals again are able to offer management suggestions based on current land operations.

Regional Forest Meetings

To bring awareness of the landowner grant, two presentations were given to regional Consulting Forester/ Service Forester Meeting. These conferences were held to introduce social marketing concepts and begin thinking about approaching forestry services from a business instead of biological perspectives. Meetings were held for Region 1 in Kinston, North Carolina and Region 2 in Durham North Carolina. Participants consisted mainly of state foresters and rangers with a few individuals from the private industry.

Deliverables

Marketing materials were designed to serve both the family woodland owner and the natural resource professional. They provide information on prime prospect profiles and programs available to landowners who are considered prime prospect through the forest service. These materials have been created to be insightful and encourage both landowners to reach out for advice on land management and for professionals to increase the quantity of landowners served.

Brochures and tri-folds were created and printed for landowners use. This was a direct response to the surveyed professionals claim that written material was the most effective and insightful. The purpose of this deliverable was to provide new landowners with hands on material that can be kept and reviewed by the landowner in the privacy of their own home. It is DFR's hope that with more educational material at hand, landowners will have more opportunities to ask questions and seek out information on their own. Multiple tri-folds were created with landowner objectives and top concerns in mind; a large portion of the information covers subjects relatable to the specific profile. For example, woodland retreat owners would receive a tri-fold focused on forest legacy programs while working-the-land-owners would receive a tri-fold focused on land investments. These materials will have information on most applicable programs to the landowner's needs and contact information to their specific district forester.

Marketing materials were also created to assist natural resource professionals in the field. The "Have You Met Me Cards" are available for both woodland retreat owners and working-the-land-owners. These deliverables serve as fact sheets and allow quick reference material to the family woodlad owner. The purpose behind this idea was to give the professional an *at a glance view* of landowner objectives, concerns, communication tips and advice as well as applicable programs. Profile cards would be distributed to each district office and encourage professionals to reaching out to new clientele. With this type of targeted direct marketing, it is DFR's hope to alleviate communication and programmatic barriers.

Conclusions

Identifying Prime Prospect landowners and exposing them to US Forest programs and service will help safeguard North Carolina's natural resources. The overall shift of landowner objectives in the state will change how forestry professionals approach the industry as well as new clients. Woodland Retreat owners are a fast growing profile in the piedmont and are looking for professionals to help guide them in management decisions. Knowing their goals will aid professionals to steering them to appropriate programs that are both affordable and applicable to their values. Similarly, working-the-land owners represent a large portion of the coastal plains and professionals should be aware of their management trends so that they may serve the family woodland owner in this region to the best of their ability.

By approaching forestry from a business perspective rather than a biological viewpoint, it is theorized that professionals will be more effective and efficient in selling forestry programs and providing field recommendations. Using the National Woodland Owner Survey as the foundation of information in North Carolina, professionals can apply social marketing techniques to identify landowners that express high interests in stewardship and are currently not engaged in forestry services. These prime prospects will allow natural resource professionals to further segment woodland owners by attitude in order to learn how to identify, communicate and engage effectively.

Using social marketing approaches to advertise to new clientele can reduce the natural resource professional's daily workload. Participants from the conferences and the survey were concerned about current daily task loads and how this scheme could further burden them. This is not true however. Prime prospect landowners are already interested in sustainable and stewardship options, however they are not participating in programs. The role of the professional is to provide the necessary push in the right direction and expertise to these landowners so that they will engage in active management, seek assistance and develop a management plan. Also by knowing how to communicate with landowners, professionals cannot only apply these techniques to future clients but to current ones as well.

As natural resource professionals it is necessary to keep in perspective the difference between value and importance of a management plan. When communicating with prime prospects, management plans should emphasize how a plan is valuable to families in accomplishing their goals. For example, landowners that are interested in legacy and passing land down to heirs can take comfort that an implemented management plan can help alleviate land transfer concerns in the future. Also, landowners that are interested in conservation programs can appreciate that their management plan is improving wildlife by implanting a plan focused on habitat preservation. Therefore, professionals know that increasing the number of active management plans in North Carolina promotes sustainable forestry practices, but it is important to communicate the value of each individual plan to the landowner. By using the social marketing techniques, professionals will be able to tailor specific messages of value to prime prospects in their area.

Social marketing is the first step in changing how professionals relate to woodland owners in the state. However the forestry professional must take ownership of this program for it to be successful. It is necessary to arm the professional with educational tools and materials that will efficiently and effectively use their time and increase the probability that a landowner will seek assistance and obtain a management plan. The fact that many landowners are currently being underserved in North Carolina opens the state to a serious liability in that a large portion of our natural resources are currently unprotected. In order to conserve the woodlands, it is necessary to change the attitudes and behaviors of the owners and stress the importance of a written management plan.

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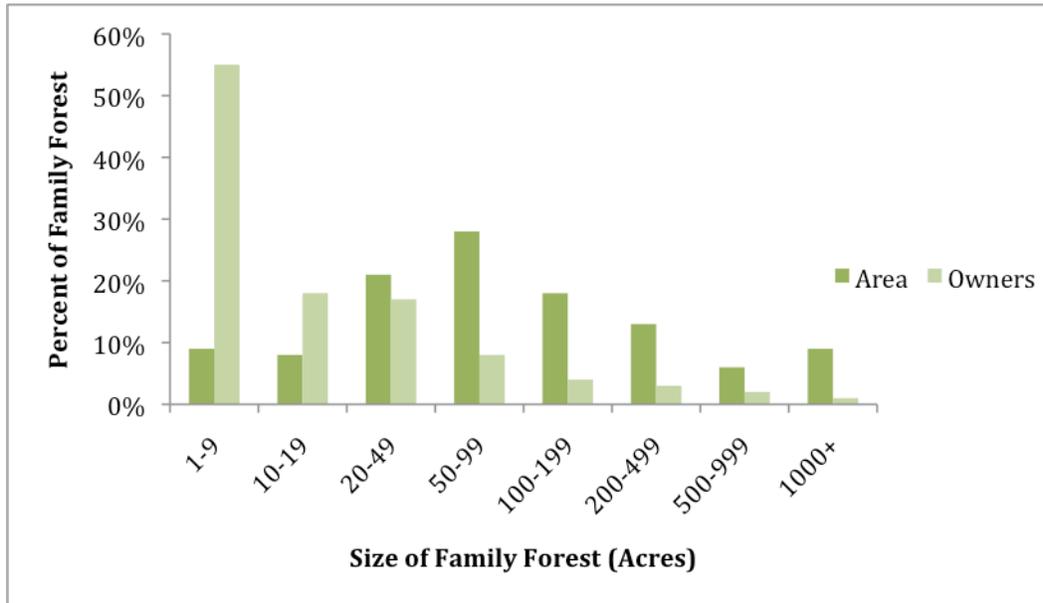
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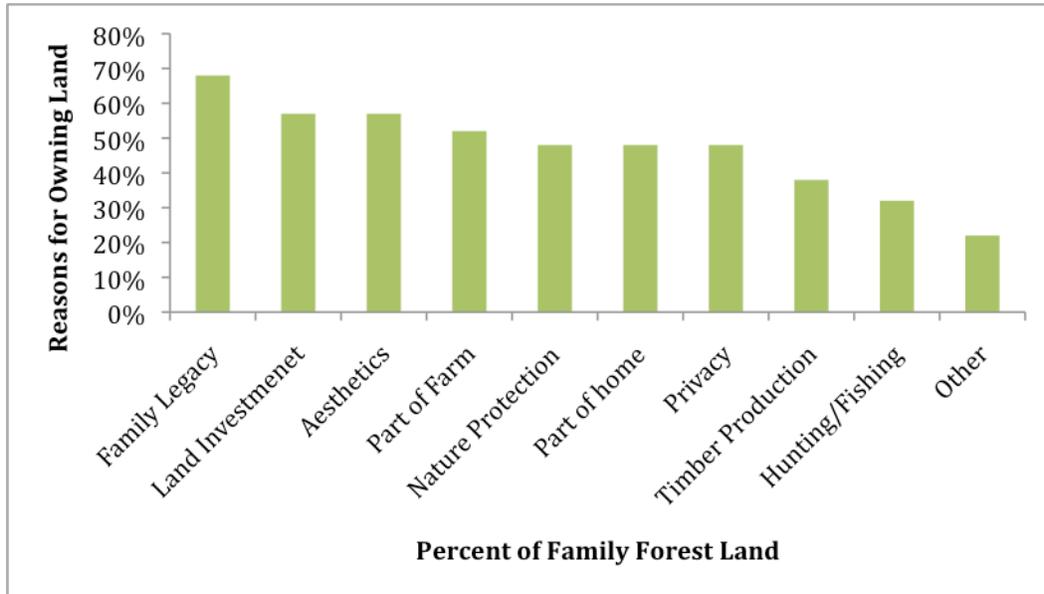
Figures

Figure 1. National Woodland Owner Survey Family Forest Holdings



(Butler and Leatherberry, 2004)

Figure 2: National Woodland Owner Survey: Reasons for Owning Land



(Butler, 2010)

Figure 3: National Woodland Owner Survey: Land Management Trends

(Butler, 2010)

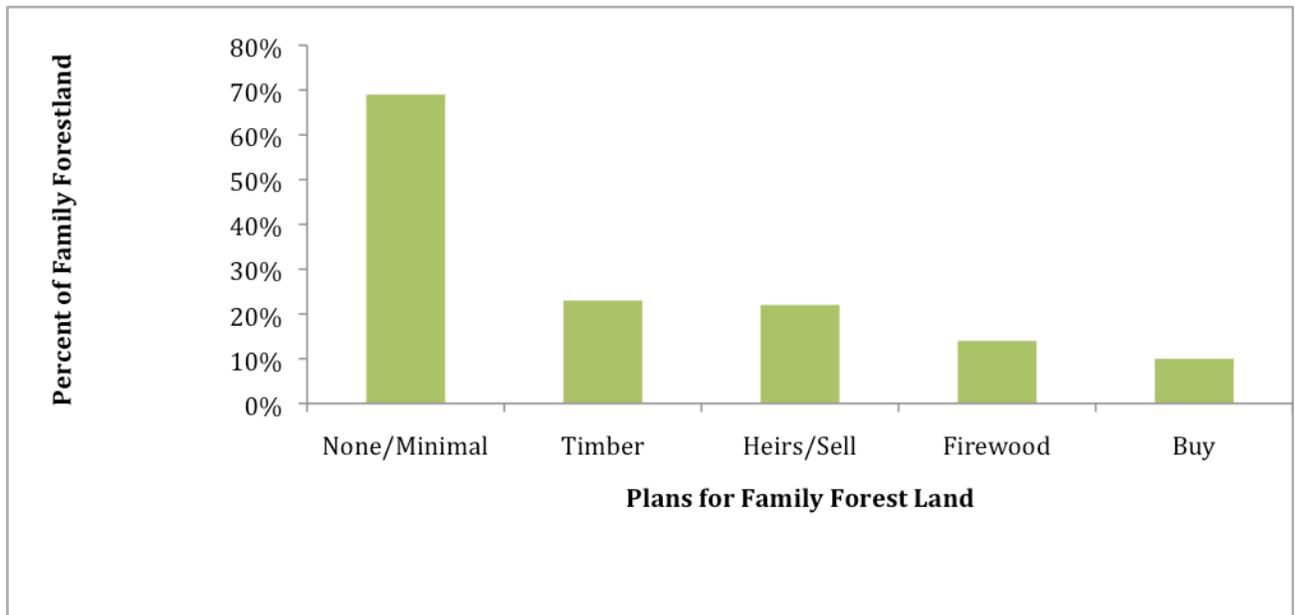
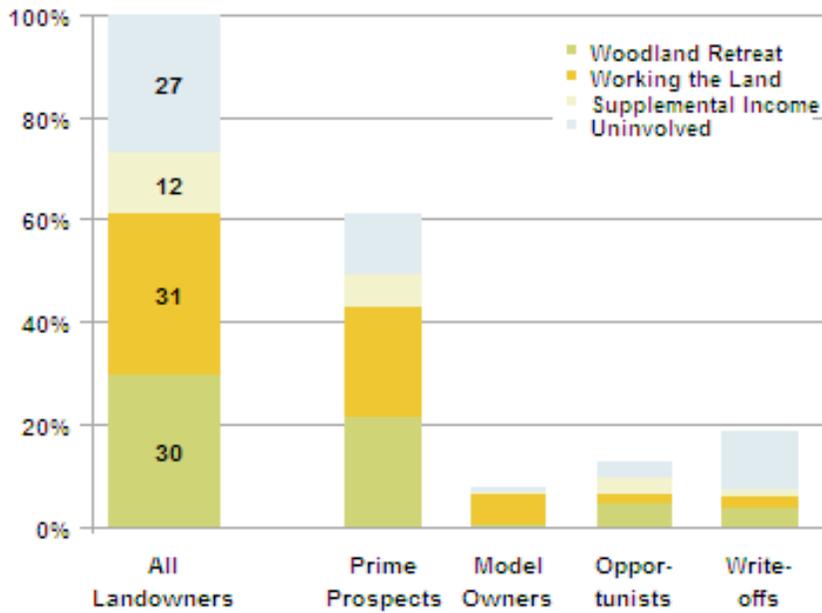


Figure 4: Prime Prospect Analysis

	Favorable Attitudes Towards Stewardship	Unfavorable Attitudes towards Stewardship
Engaged in Land Management	Model Owners	Opportunists
Unengaged in Land Management	Prime Prospects	Write Offs

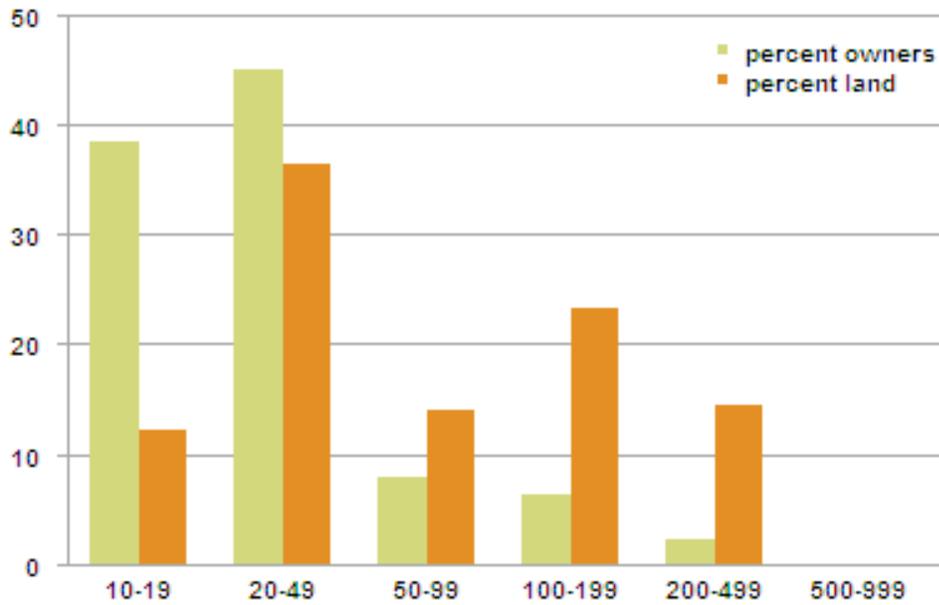
(TELE,2009)

Figure 5: Prime Prospect Make up in North Carolina



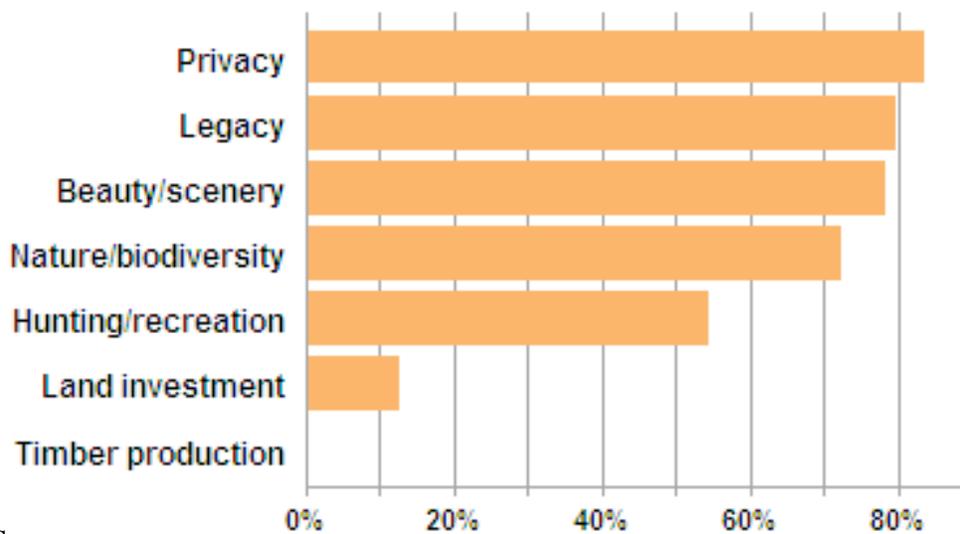
(TELE, 2009)

Figure 6: TELE Forest Holdings for Woodland Retreat Owners in acres in NC



(TELE, 2009)

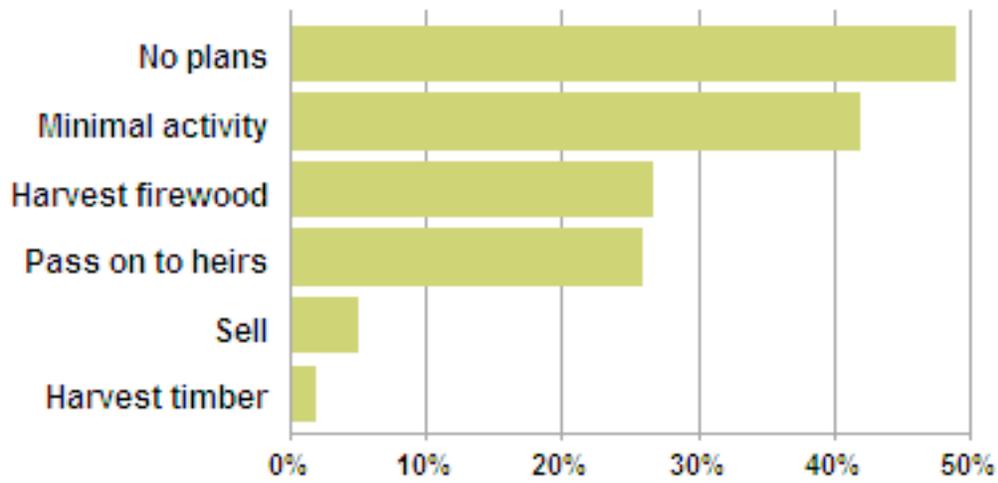
Figure 7: TELE Reasons for Owning Land for Woodland Retreat Owners in



NC

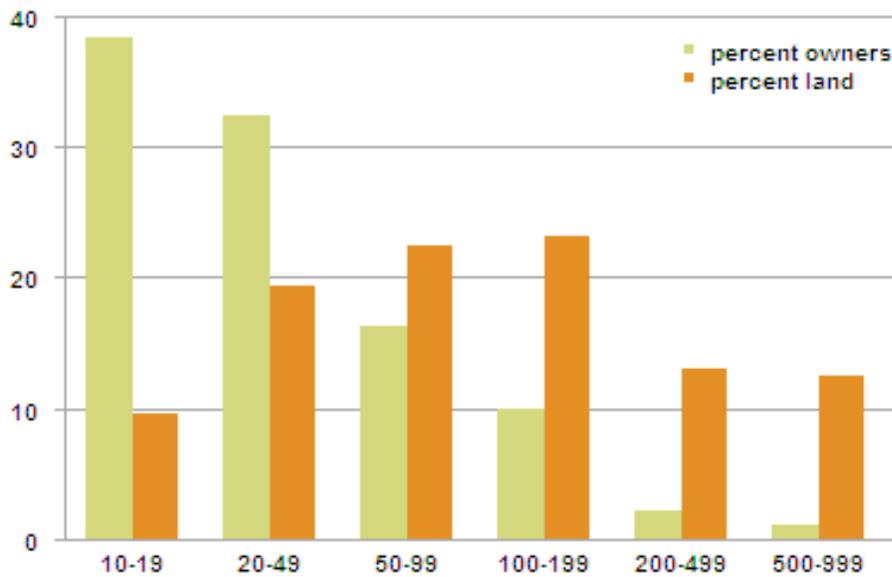
(TELE, 2009)

Figure 8: TELE Land Management Trends for Woodland Retreat Owners in NC



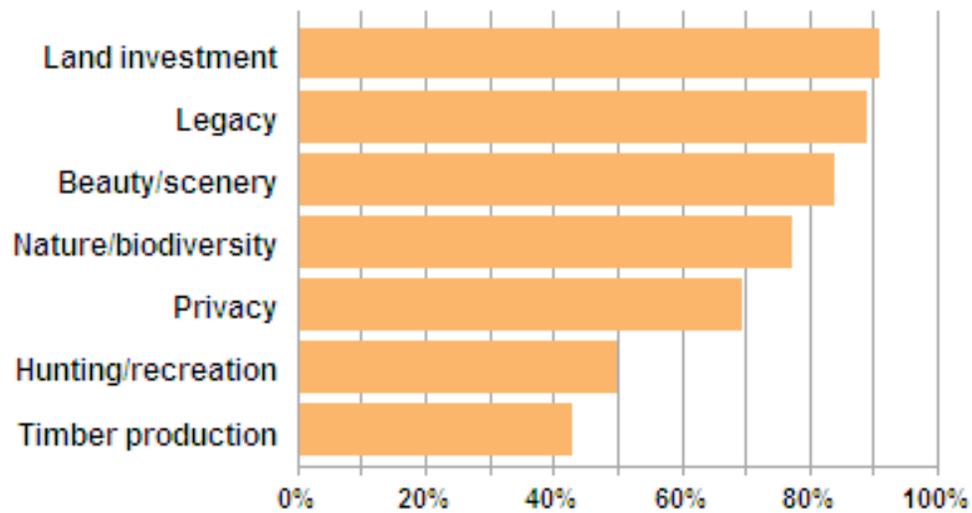
(TELE, 2009)

Figure 9: TELE Forest Holdings for Working the Land Owners in acres in NC



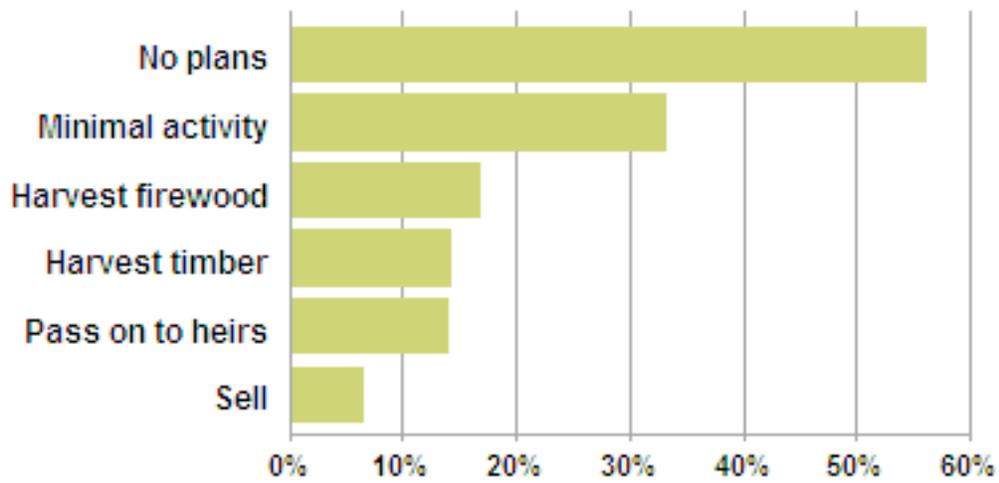
(TELE, 2009)

Figure 10: TELE Reasons for Owning Land for Working the Land Owners in NC



(TELE, 2009)

Figure 11: TELE Land Management Trends for Working the Land Owners in NC



(TELE, 2009)

Graphs and Tables

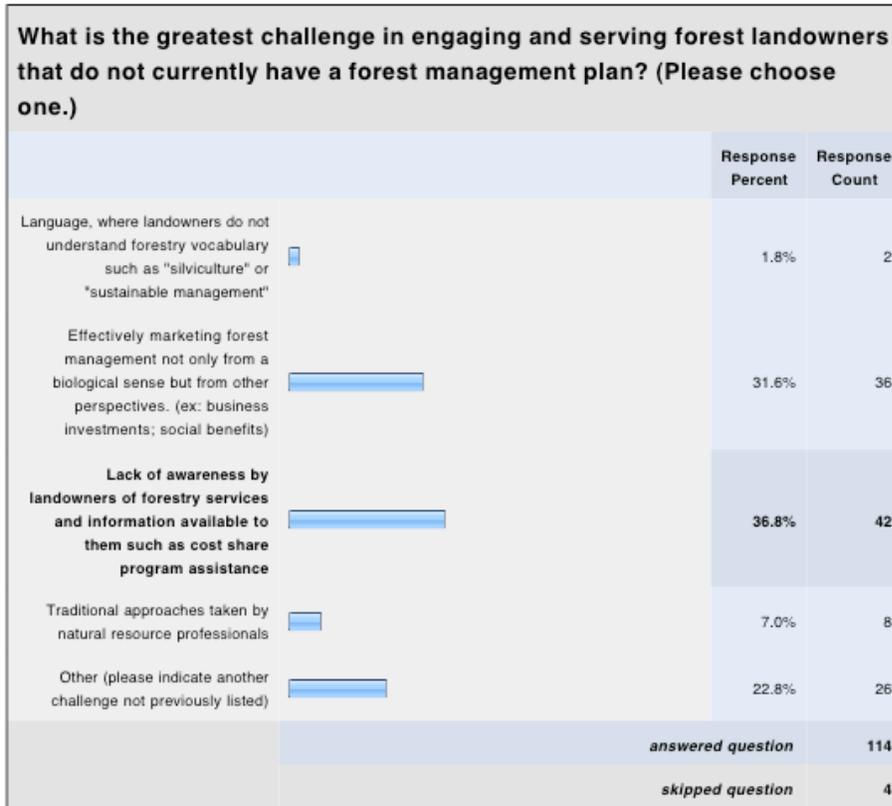
Graph 1: Results from Engagement Plan Survey, Question 1

Please indicate your Natural Resource Professional status. (Please choose one)		
	Response Percent	Response Count
NCDFR Forester	24.6%	28
NCDFR Ranger	12.3%	14
NC Consulting Forester	47.4%	54
Other (please specify)	15.8%	18
<i>answered question</i>		114
<i>skipped question</i>		4

Graph 2: Results from Engagement Plan Survey, Question 2

What landowner information would best help you understand the characteristics of unreached or potential clients? (Please choose all that apply.)		
	Response Percent	Response Count
Demographic Information	29.8%	34
Landowner Ownership Objectives	56.1%	64
Landowner Attitudes/Barriers relating to Forest Management	75.4%	86
Communication Tips and Advice	29.8%	34
Other (Please provide additional landowner information not previously listed that would assist your understanding of these landowners/clients.)	14.9%	17
<i>answered question</i>		114
<i>skipped question</i>		4

Graph 3: Results from Engagement Plan Survey, Question 3



Graph 4: Results from Engagement Plan Survey, Question 4

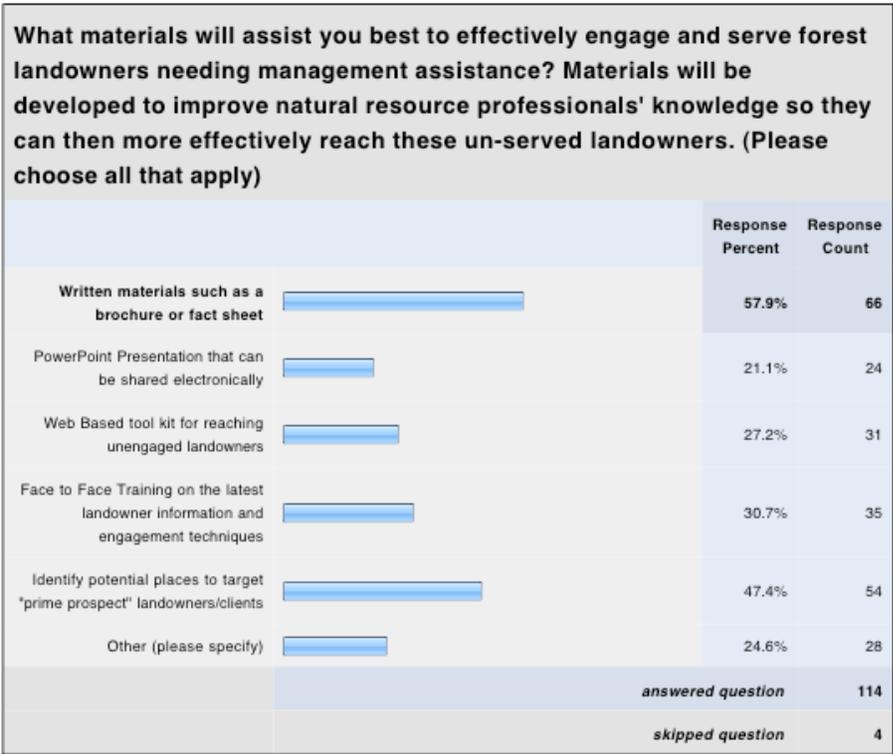


Table 1: Example Data from Land Cover Equation for Spatially Analyzing Properties

Name	Acres	Developed	Ag	Woodland	Water
Morris	46.99	1.2%	8.43%	90.3%	0.0%
Hunter	74.56	1.6%	40.38%	57.69%	.32%

Appendix A: Terms for Submission of non-thesis masters papers to the NCSU Digital Repository:

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